

FIG. 1

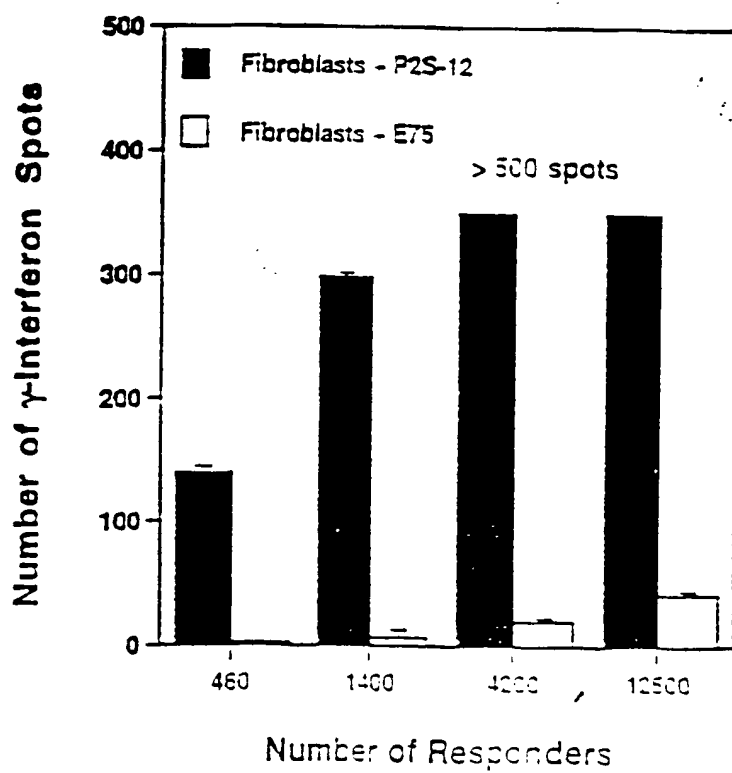


FIG. 2.4

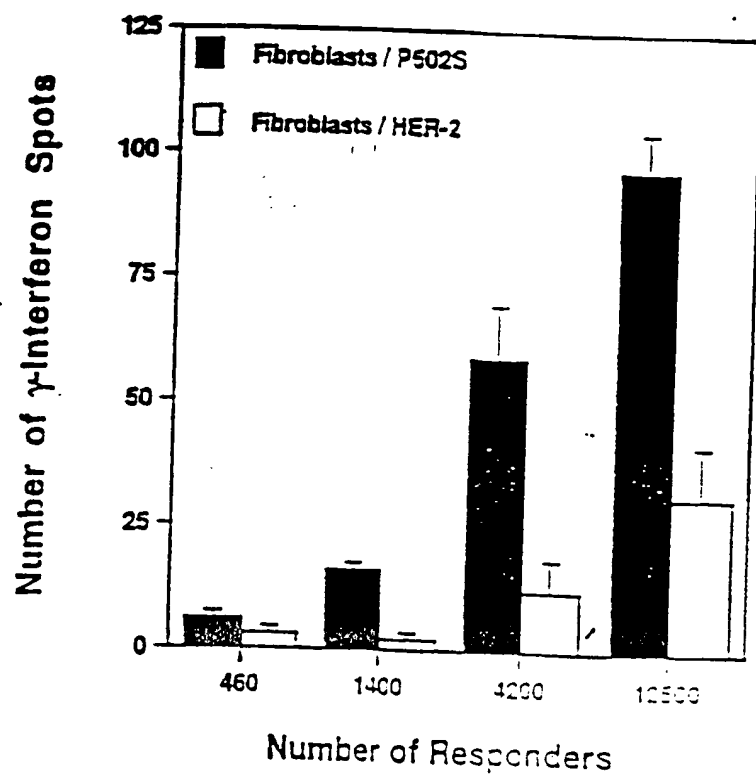
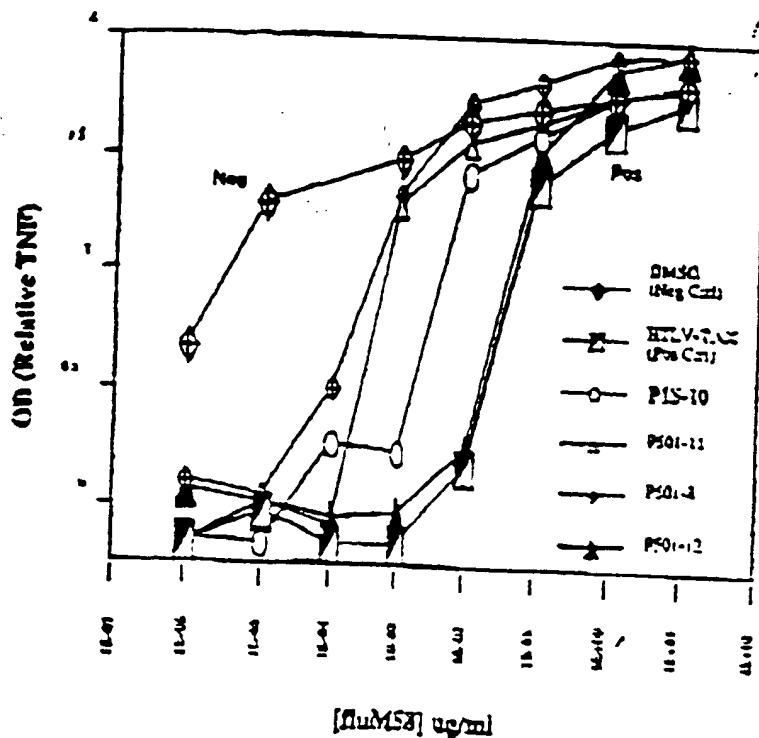


FIG. 2B

002250-66250360



Figure

3

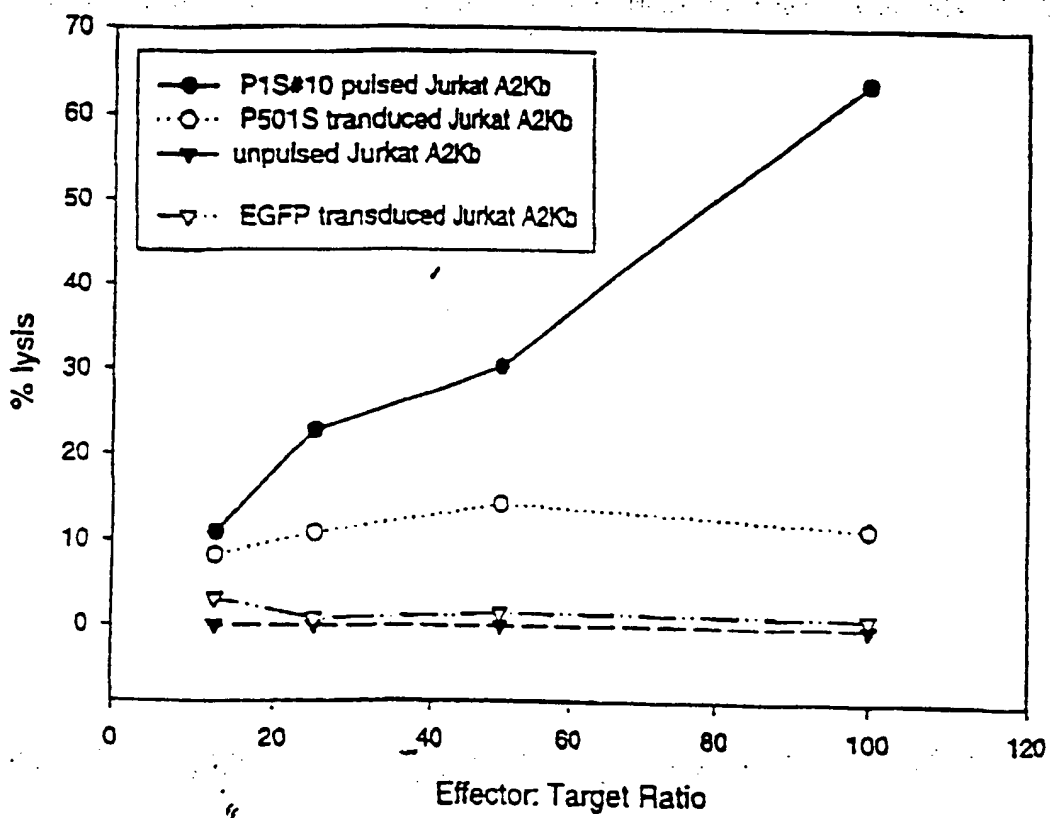


Figure 4

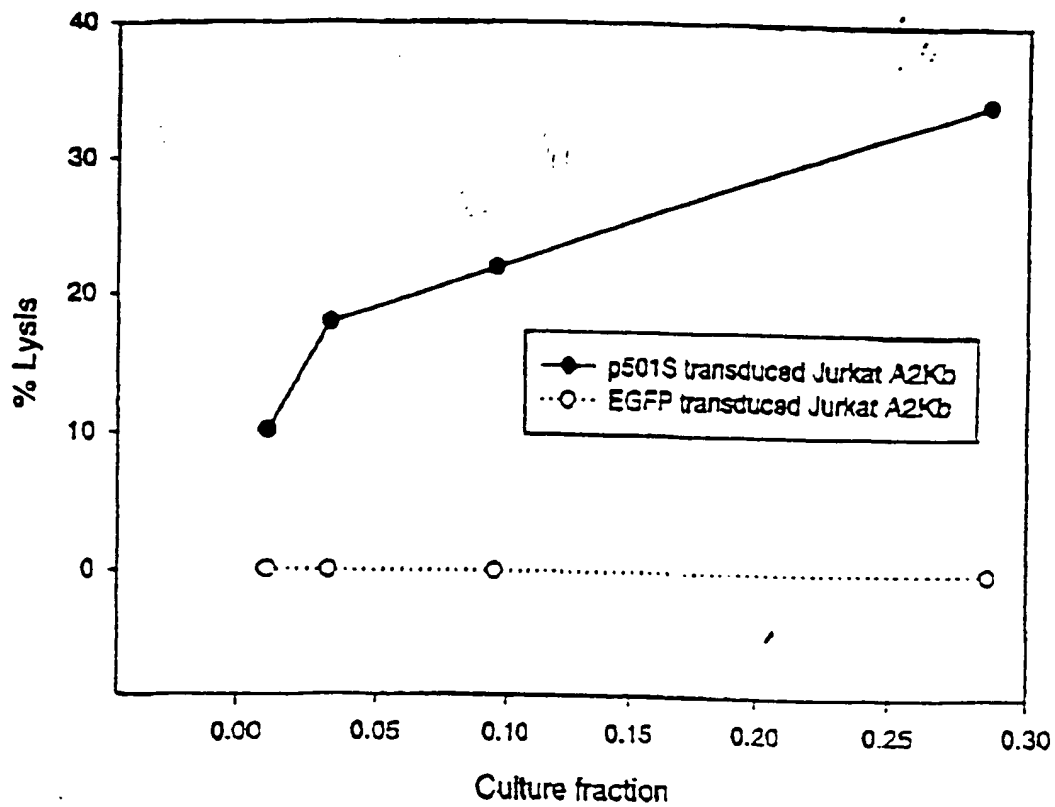


Figure 5

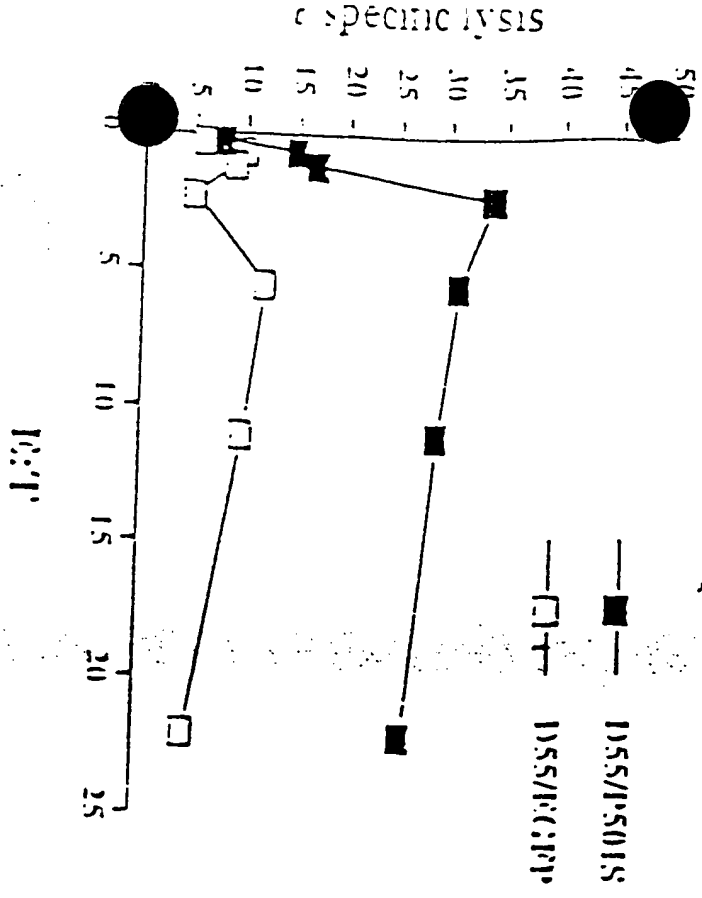


Fig. 6A

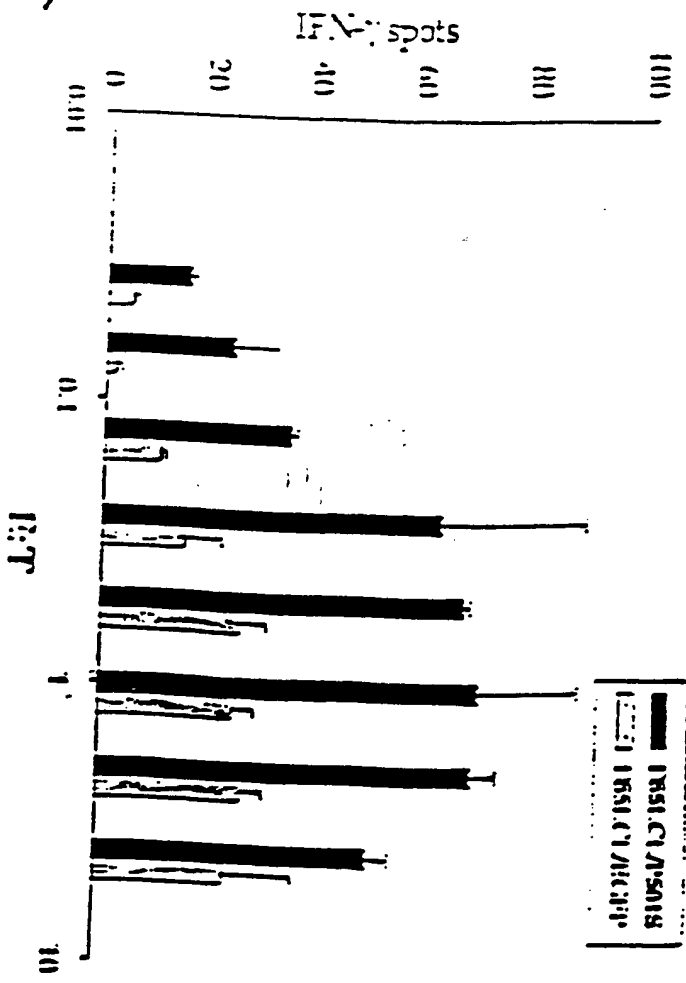
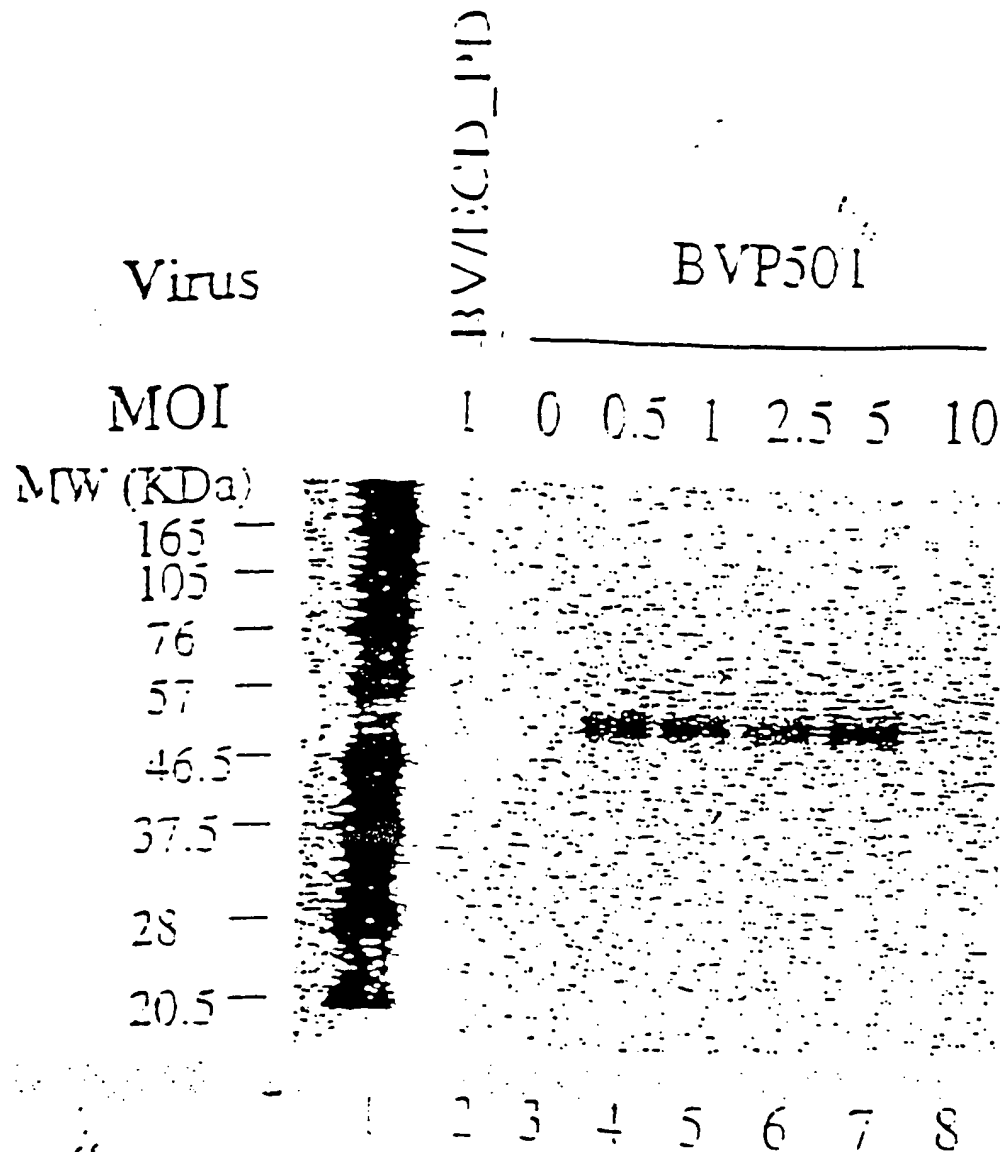


Fig. 6B

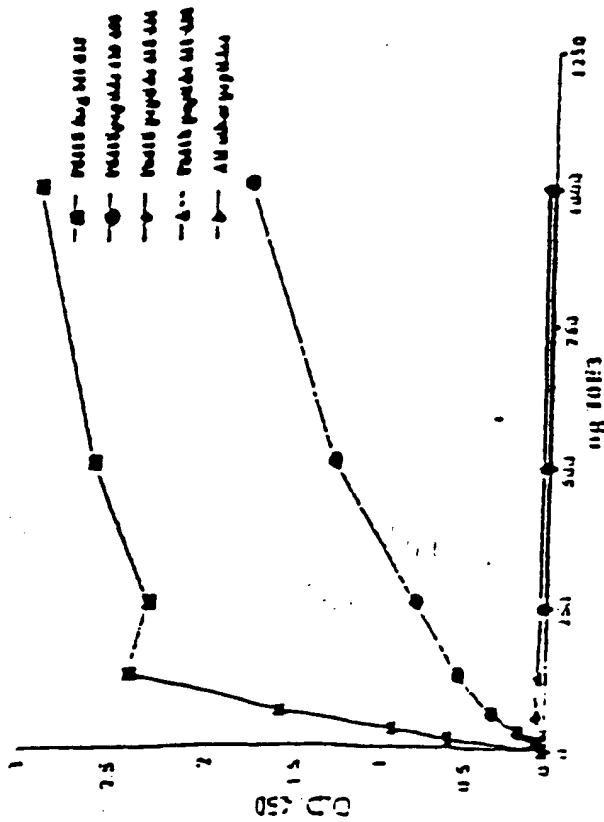
Expression of P501S by the Baculovirus Expression System



0.5 million high titer cells in 6-well plate were infected with an unrelated control virus BV/ECID_P501 (Lane 2) or without virus (Lane 3) or with recombinant baculovirus for P501 at different MOIs (Lane 4-8). Cell lysates were run on SDS-PAGE under the reducing condition and analyzed by Western blot with a monoclonal antibody against P501S (BES-04-D1). Lane 1 is the biotinylated protein molecular weight marker (BioLabs).

Fig. 7

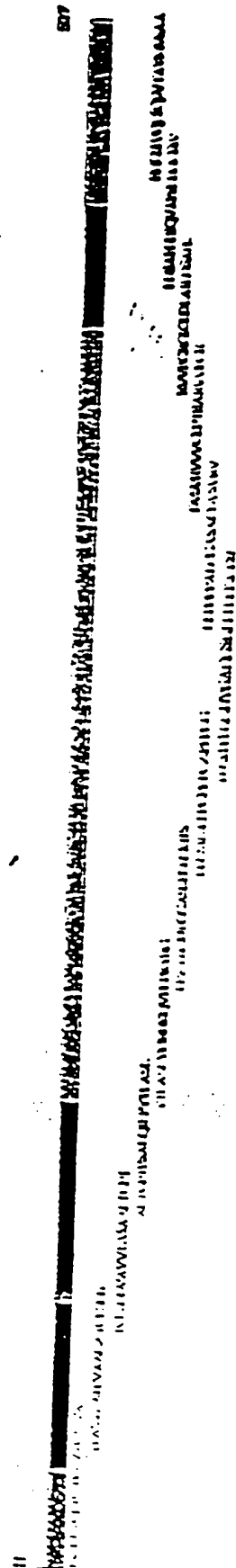
Figure 8. Mapping of the epitope recognized by 10E3-C4-D3



Legend:
[] : Full length PS01S
[] : PS01S aa 1-100
[] : PS01S aa 101-200
[] : PS01S aa 201-300
[] : All other peptides

Full length PS01S

PS01S fragment used for immunization:



7

Figure 1. Schematic of P501S with predicted transmembrane, cytoplasmic, and extracellular regions

MVQRIAVVRIIRIK AQILLVNLITTEILEVCLAAQT VVPTLLLEKGVREKPAI TMVLGICPVILGLVCYPIILGSAF
 DWWRGRVYRRRP FIVVLSLQILSLFIPRAGWL AGLLCTDPRPLF LAILLQVQLLDICQDVCPTPL
 FLLSLFERDPDHCRL AYSVYAFMSLGGCTGYIIPAI DWVDSALAPVLCYQDE
 CLPGLITLITCYAATLLY AEFALGPTEPAECLNAPSSTPITCP RARLAFRNLCALIPRI
 DDLCTRRPFRIR LPVAFICVWMALNITITETTP VGGELVQGVPIAPPGTLEARNHYDEGVH
 MGLSLQLFLQCAISLYESLYM DRIVQRECTREAVYLAS VAAITPYAAGATCLSHSVAVVTA SAA
 LTGEFTSALQILPYTLASLY HREKQVFLPKYRGDTGCASSDSTSTFLPQPKPGAPFPNQIIVQAGQSGIL
 LPPPPALCGASACDVSVRVVVGHEFTEARVVPKRG ICLDLAILDSAPHLSDYAPSLF MGSIVQISQS
 VTAYMVSAAGLGLVAYIPAT QVVFDKSNLAATSA

Fig. 9

Underlined sequence: Predicted transmembrane domain; Bold sequence: Predicted extracellular domain;
 Italic sequence: Predicted intracellular domain. Sequence in bold/underlined: used to generate polyclonal rabbit serum

Localization of domains predicted using HMMTOP (C.P. Tusnady and I. Simon (1998) Principles
 Governing Amino Acid Composition of Integral Membrane Proteins: Applications to topology Prediction. J.Mol Biol. 283,
 489-506.

Genomic Map of (5) Corlxa Candidate Genes

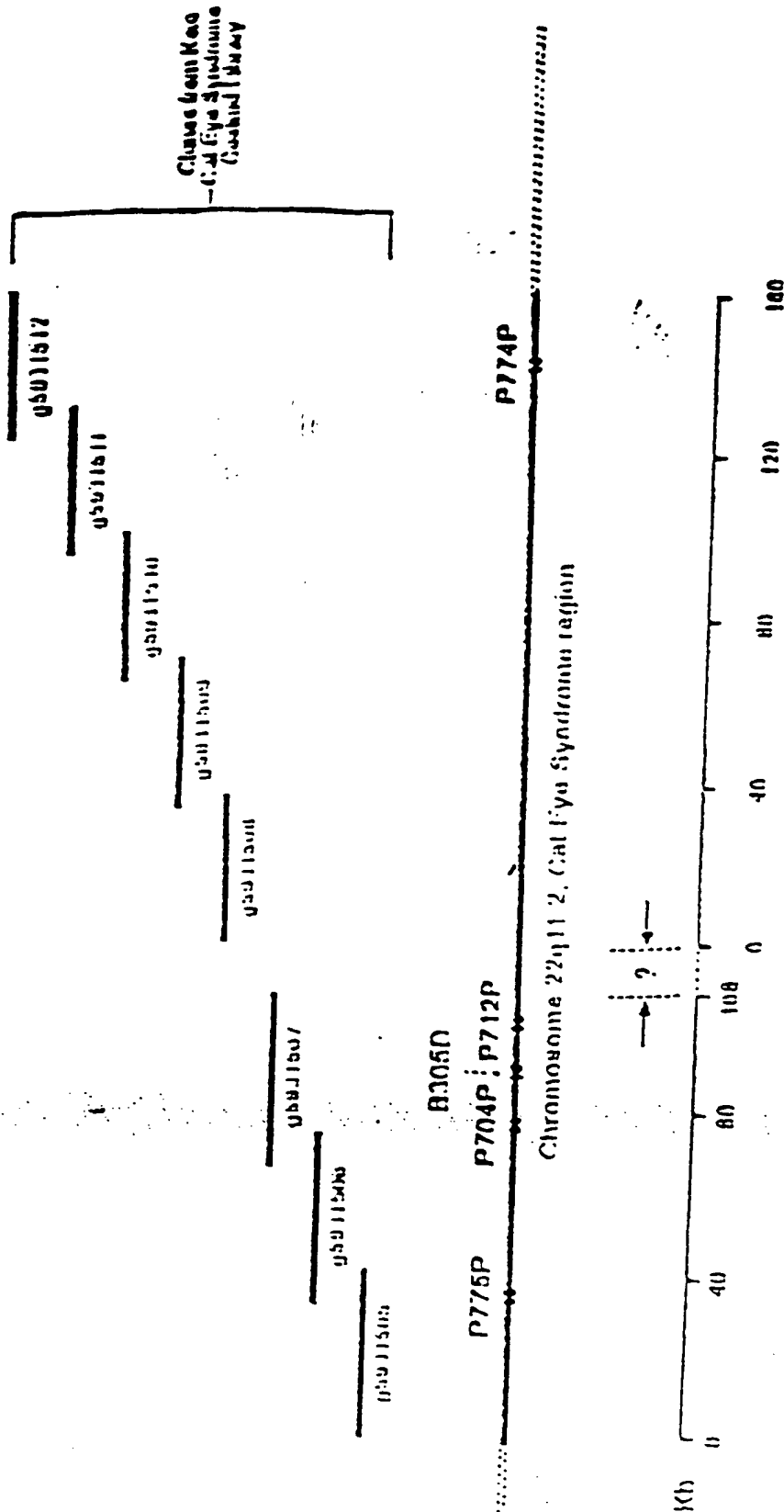
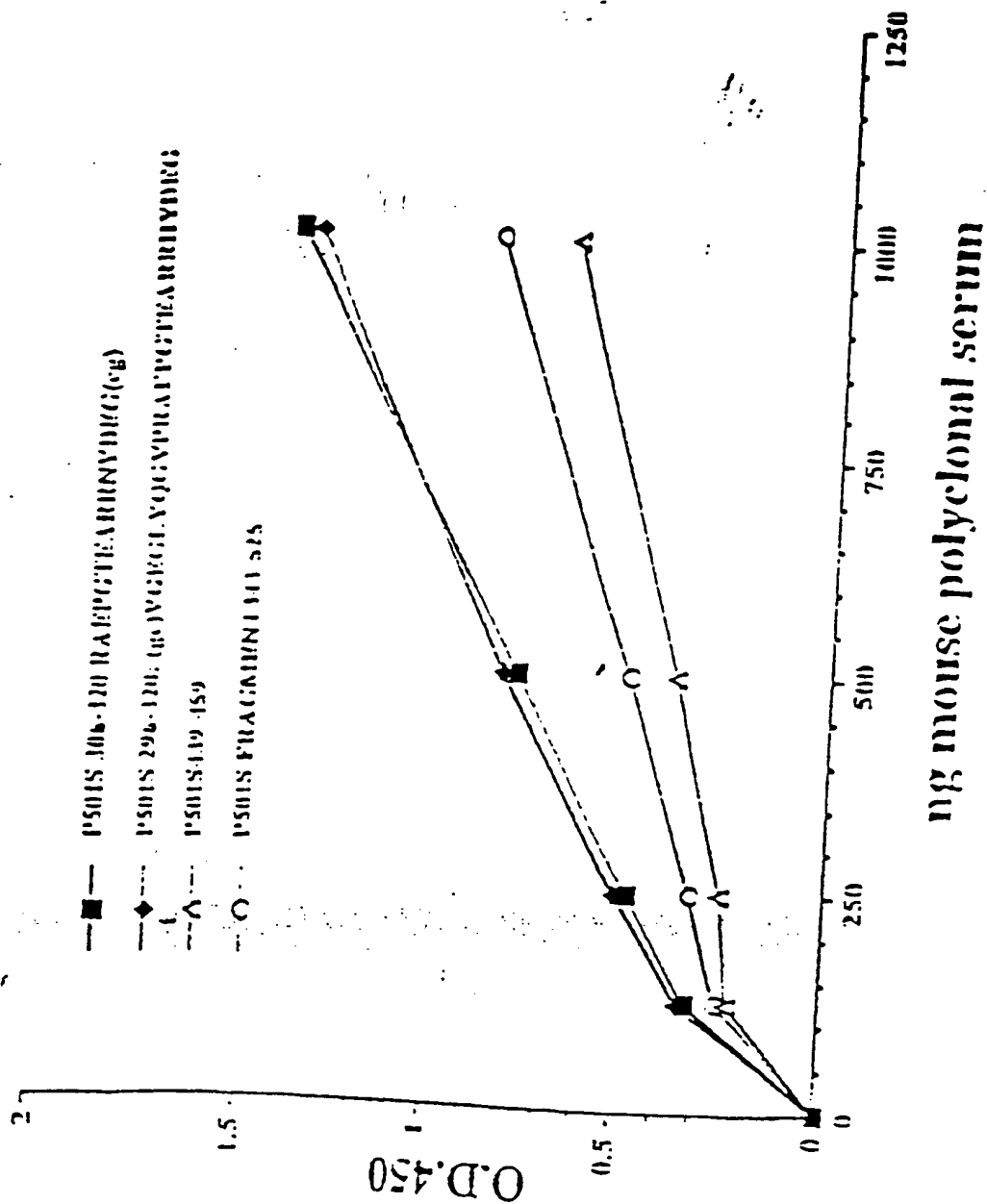


Fig. 10

FIGURE 4. Elisa assay of rabbit polyclonal antibody specificity



10 20 30 40 50 60 70
 GTCACCTTAGGAAAAGGTGTCTTTTCGGGCAGCGGGGCTCAGCATGAGGAACAGAAGGAATGACACTCTGG 70
 ACAGCACCCGGACCCCTGTACTCCAGCGCGTCTCGGAGCACAGACTTGTCTTACACTGAAAGCGACTTGGT 140
 GAAATTTTATTCAAGCAAATTTTAAGAAACGAGAATGTGTCTTCTTTACCAAAGATTCCAAGGCCACGGAG 210
 AATGTGTGCAAGTGTGGCTATGCCAGAGCCAGGCATGGAAGGCACCCAGATCAACCAAAGTGAGAAAT 280
 GGAAC TACAAGAAACACACCAAGGAATTTCTTACCGAGCCCTTTGGGGATATTTCAGTTTGAGACACTGGG 350
 360 370 380 390 400 410 420
 GAAGAAAGGGAAGTATATACGTCTGTCTTGC3ACAGGACGCGGAAATCCTTTACGAGCTGCTGACCCAG 420
 CACTGGCACTTGAAAACAACCAACCTGCTCATTTCTGTGACCGGGGGCGCCAAGAAGCTTCGCCCTGAAGC 490
 CGCGCATGCGCAAGATCTTCAAGCGGCTCATCTACATCGCGCAGTCCAAAGGTGCTTGGATTCTCAGGG 560
 AGGCACCCATTATGGCCTGACGAAGTACATCGGGGAGGTGGTGAGAGATAACACCATCAGCAGGAGTTCA 630
 GAGGAGAATATTGTGGCCATTGGCATAGCAGCTTGGGCGATGGTCTCCAAACGGGACACCCCTCATCAGGA 700
 710 720 730 740 750 760 770
 ATTGGGATGCTGAGGGCTATTTTTTAGCCCAAGTACCTTATGGATGACTTCACAAGGGATCCACTGTATAT 770
 CCTGGACAACACACACACATTTGGCTGCTGGTGGACATGGCTGTGATGGACATCCCACTGTGCAAGCA 840
 AAGCTCCGGAATCAGCTAGAGAAAGCATATCTGTGAGCGCACTTATCAAGATTCCAACTATGGTGGCAAGA 910
 TCCCATTTGTGTGTTTGGCCAAAGGAGGTGGAAAGAGAGCTTGAAGGCCATCAATAGCTCCATCAAAAA 980
 TAAAAATTCCTTGTTGGTGGTGGAAAGGCTCGGGCGGATCGCTGATGGATCGCTAGCCCTGGTGGAGGTG 1050
 1060 1070 1080 1090 1100 1110 1120
 GAGGATGCCCCGACATCTTTTCCCGTCAAGGAGAAGGTGGTGGCTTTTACCCCGCAGGGTGTCCGGG 1120
 TGTCTGAGGAGGAGACTGAGATTTGGATCAAAATGGGTCAAAAGAAATTTCTGAAATGTTCTCAGCTATTAAC 1190
 AGTTATTAAATGGAAAGATTTGGGGATGAAATTTGTGAGCAATGGCATCTCTACGGCTCTATACAAAGCC 1260
 TTTCAGCACCAGTGAGCAAGACAAAGGATAACTGGAATGGGC-GTTGAAGGTTCTGTGGAGTGGAAACAGC 1330
 GTGGACTTAGCCAAATGATGAGATTTTACCAATGAGCGCGATGGGAGTCTGCTGACCTTCAAGAAATCAT 1400
 1410 1420 1430 1440 1450 1460 1470
 GTTTACGGCTCTCATAAAGGACAGACCAAGTTTGTCCGCTCTTTCTGGAGAATGGGTTGAACCTACGG 1470
 AAGTTTCTCAGCCATGATGTCTCACTGAAGCTCTCTCCAACTACTTCAGCAGCTTGTGTACCGGAATC 1540
 TGCAGATCGCCAAAGAAATTCCTATAATGATGCGCTCTCTCAGCTTGTGTGGAAGCTGGTTGCGAATCTCC 1610
 AAGAGGCTTCGGGAAGGAAGACAGAAATGGCGGGGATGAGATGGACATAGAACTCCAGGACGTGTCTCT 1680
 ATTACTCGGCACCCCTGCAAGCTCTCTCTCATCTGGGCCATCTTTCAGAAAGGAAGGAATCTCCAAAG 1750
 1760 1770 1780 1790 1800 1810 1820
 TCATTTGGGAGCAGACACGGGGGTGCACTCTGGCAGCCCTGGGAGCCAGCAAGCTTCTGAAGACTCTGGC 1820
 CAAGGTGAAGATGACATCAATGCTGTGTGGGAGTTCGAGGAGCTGGCTAATGAGTACGAGACCCGGGCT 1890
 GTTGAGCTGTCTCACTGAGTGTACAGCAGCGATGGAAGACTTGGCAGAACAGTGTGTGGTCTATTCTGTG 1960
 AAGCTTGGGGTGGAAAGCACTGTCTGGAGCTGGGGTGGAGGCTACAGACCAATTTCAAGCGCCAGCC 2030
 TGGGGTCCAGAAATTTCTTTCTAAGCAATGGATGGAGAGATTTCCCGAGACACCAAGAACTGGAAAGATT 2100

Fig. 12A (i)

002250-68250960

2110	2120	2130	2140	2150	2160	2170
TCCTGTGTCTGTTTATTATACCCCTTGGTGGGCTGTGGCTTTGTATCATTTAGGAAGAAACCTGTCGACA						2170
AGCACAAGAAGCTGCTTTTGGTACTATGTGGGCTTCTTCACCTCCCCCTTCGTGGTCTTCTCCTGGAATGT						2240
GGTCTTCTACATCGCCCTTCCCTCCTGCTGTTTGGCTACGTGGTGGTCAATGGATTTCCATTGGGTGCCACAC						2310
CCCCCGGAGCTGCTCCTCTACTCCCTGGTCTTTGTCTCTTCTGTGATGAAGTCAGACAGTGGTACGTAA						2380
ATGGGGTGAATTATTTTACTGACCTGTGGAAATGTGATGGACACGCTGGGGCTTTTTTACTTTCATAGCAGG						2450
2460	2470	2480	2490	2500	2510	2520
AATTGTATTTTGGCTCCACTCTTCTAATAAAAGCTCTTTGTATTCTGGACGAGTCATTTTCTGTCTGGAC						2520
TACATTATTTTCACTCTAAGATTGATCCACAATTTTACTGTAAGCAGAAACCTAGGACCCCAAGATTATAA						2590
TGCTGCAGAGGAAGCTGATCGATGTGTTCTTCTCTCTTTGCGGTGTGGATGGTGGCCTTTGG						2660
CGTGGCCAGGCAAGGGATCCTTAGGCAGAAAGAGCAGGCTGGAGGTGGATATTCGGTTCGGTCACTAC						2730
GAGCCCTACCTGGCCATGTTCCGCCAGGTGCCCAGTGACGTGGATGGTACCACGTATGACTTTGCCCACT						2800
2810	2820	2830	2840	2850	2860	2870
GCACCTTCACTGGGAATGAGTCCAAAGCCACTGTGTGTGGAGCTGGATGAGCACAACCTGCCCGGTTCCC						2870
CGAGTGGATCACCATCCCCCTGGTGTGCATCTACATGTTATCCACCAACATCCTGCTGGTCAACCTGCTG						2940
GTCGCCATGTTTGGCTACACGGTGGGCACCGTCCAGGAGAACAAATGACCAAGGTCTGGAAGTCCAGAGGT						3010
ACTTCTTGGTGCAGGAGTATCGCAGCGCGCTCAATATCCCTTCCCTTCATCGTCTTGGCTTACTTCTA						3080
CATGGTGGTGAAGAAGTGGTTCAAGTGTGTGTGAAGGAGAAACATGGAATCTTCTGTCTGTGTCTTCT						3150
3160	3170	3180	3190	3200	3210	3220
AAAAATGAAAGCAATGAGACTCTGGCATGGGAGGGTGTGATGAAGGAAAACTACCTTGTCAAGATCAACA						3220
CAAAAGCCAAAGCAACCTTCAGAGGAAATGAGGCAATGATTTAGACAACTGGATACAAAGCTTAATGATCT						3290
CAAGGGTCTTCTGAAAGAGATTGCTAATAAAATCAATTAATCTGTATGAACCTCTAATGGAGAAAAATC						3360
TAAATTATAGCAAGATCATATTAAAGGAATGCTGATGAACATTTTGGTATCGACTACTAAATGAGAGATT						3430
TCAGACCCCTGGGTACATGGTGGATGATTTAAATCACTTATAGTGTGCTGAGACCTTGAGAAATAAGTGT						3500
3510	3520	3530	3540	3550	3560	3570
GTGATTGTTTTCATACCTTGAAGACGGATATAAAGGAAGAAATTTTCTTTTATGTGTTCTCCAGAAATGGT						3570
GCCTGTTTCTCTCTGTGTCTCAATGGCTGGGACTGGAGGTTGATAGTTTAAAGTGTGTTCTTACCGGCTCC						3640
TTTTTCTTTTAACTCTTATTTTGTATGAACACAATATAGGAGAACATCTATCTATGAATAAGAACCTGG						3710
TCATGCTTTACTCCTGTATTGTATTGTGTTCAATTCGAATGGATTCTCTACTTTTCCCTTTTGTATT						3780
ATGTGACTAATTAGTTGGCATAATGTTAAAGTCTCTCAATTAGGCCAGATTCTAAACATGCTGCAGC						3850
3860	3870	3880	3890	3900	3910	3920
AAGAGGACCCCGCTCTATTTCAGGAAAAAGTGTATTCATTTCTCAGGATGCTTCTTACCTGTGAGAGGAGGT						3920
GACAAGGCAATCTCTTGGCTCTCTGGACTCATCAGGCTCTATTGAAGGAAACACCCCAATCTTAATAA						3990
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GAACATAAAATGTCCCAATTACCTTAAGGTAATCACTGCTAACAATTTCTGGATGGTTTTTCAAGTCTAT						4200
4210	4220	4230	4240	4250	4260	4270
TTTTTTCTATGATGTCTCAATTTCTCTTCAAAAATTTACAGAAATGTTATCATACATACATATACTTT						4270
TTATGTAAGCTTTTTTCACTTAGTATTATTAACAATAATTTTATTATATTCATAGCTTTCTTAACATT						4340
ATATCAATAAATGGCAATAAGGCAACCTCTAGCGAATACCAATAATTTTGGTCAATGAAGGCTATCTCCAG						4410
TTGATCATTTGGGATGAGCACTTTGTGCAATGAATCTTATGGTGTATTTGGGAAAAATTTTCAAGGTTAG						4480
ATTCCAATAAAATATCTATTATTATTAATAATTAATAATTCGATTTATTATTAAGCAATTTTATAGGCT						4550

10 20 30 40 50 60 70

MRNRRTLOSTRITLYSSASRSTOLSYSESOLVNF!QANFKKRECVFFTKDSKATENVCKCGYAQSQHME 70
 GTQINQSEKWNYYKXKHTKEFPTOAFGOIQFETLGKXGKYIRLSCOTDAEILYELLTQHWHLKTPNLVISVT 140
 GGAKNFALKPRMRKIFSRLLIYAQSKGAWILTGGTHYGLTKYIGEVRONTISRSSEENIYAIGIAAWGM 210
 VSNROTLIRNCOAEGYFLACYLMOOFTROPLYLONNHTHLLLVDNGCHGHPTVEAKLRNCKLEKHISERT 280
 IQDSNYGGKIPIVCFAQGGGKETLKAINTS(KNK:PCVVVEGSGRIADVIASLVEVEDAPTSSAVKEKLV 350

360 370 380 390 400 410 420

RFLPRTVSRLLSEETESWIKWLKE!LECSHLLTVIKMEZAGDEIVSNAISYALYKAFSTSEQCKONWNGQ 420
 LKLLLEWNCLOLANOEIFTNORRWESADLOE/MFTALIKORPKFVRLFLENGLNLRKFLTHQVLTFLFSN 490
 HFSTLVYRNLGIAKNSYNOCALLTFVWKLVANFRRGFRKEDRNGRDEMIELHCVSPITRHPLQALFIWA 560
 LONKKELSKV!WECTRGCCTLAALGASKLLKTLAKYKNOINAAAGSEELANEYETRARELFTCYSSOEDL 630
 AEQLLVYSCEAWGGSNCLELAVEATDQHFTAQPGVONFLSKQWYGEISROTKNWK!ILCLFIIPLVGCGF 700

710 720 730 740 750 760 770

VSPRKKRYCKHKLLWYYVAFFTSPPFVYFSWNVVFYIAFLLLFAYVLLMGFHSVPHPPSELVLYSLVFVLF 770
 CDEYRQWYVNGVNYFTDLWNVMOTLGLFYFIAGIVFRHSSNKSSLYSGRYFCLOYE!FTLRLIHIFTV 840
 SRNLGPKIIMLQRMILQVFFFLFLFAYWVAFGVARGGILRONEGRWRWIFRSVIYEPYLAFFGQVPSOV 910
 DGTYYDFAHCTFTGNEKFLCVELDEHNLPRFPENITPLVCIYMLSTNILLVNLVAMFGYTVGTVCEN 980
 NDCVWKFGRYFLVGEYCSRLNIPFPFIVFAYFYMYKXCFKCCCKEKNMESSVCCFKNEDNETLAWEGVM 1050

1060 1070 1080 1090 1100 1110 1120

KENYLVKINTKANDTSEEMRRFRQLODKLNCKGLKE!ANKIK. 1096

Fig. 12B